



**ALMOST SIX MILES OF FILM** — Motion picture workprints and internegatives totaling 30,558 feet recently were completed in Photographic Technology Division's Technical Laboratory Branch as a portion of Apollo-Soyuz motion pictures to be exchanged with the Soviet Union. Onboard and ground-based 16mm originals were enlarged in the lab to the Soviet standard 35mm. Group around the film prior to shipment are, left to right, Tom McGrath, Frank Zehentner, Lou Bowdre, Fran Tousignant, Denny Templin, Freda Ognosky, Tom Winston, Charles Shrimplin, and Dick Tousignant.

## JSC Program Observes Hispanic Heritage Week

In observance of the Presidential Proclamation designating September 14-20 as National Hispanic Heritage Week, the JSC Equal Opportunity Programs Office and the Hispanic Heritage Committee will present a program titled "From Santa Maria to Shuttle: Hispanic Heritage Perspectives" on Wednesday, September 17, in Building 2 at 1:00 P.M.

The program will feature speakers and films outlining the contributions of Spanish Speaking Americans to the development of our country. Dr. Josephine Sobrino, Director of Programs and Professional Education at UH/CLC, will trace Hispanic influence throughout history, while Dr. Leo Gallegos, HISD's Director of Social Studies, will review Spanish American cultural contributions in America.

Dr. Juan Gonzales of UH/CLC and Alfonso Ludi of NASA Headquarters Equal Opportunity Program Office, will present their respective analyses of the Spanish Speaking American role in the

### Center CFC Goal Set at \$168,800

Pledge cards for the 1976 Combined Federal Campaign this week were distributed to JSC employees. The campaign runs through September and, as in past years, includes organizations in the United Fund, National Health Agencies and International Service Agencies.

The JSC goal for the 1976 campaign is \$168,800.

In a letter to all employees, JSC Director Christopher C. Kraft, Jr., said, "Each year JSC employees have achieved 100 percent or more of our assigned goal. It is my sincere hope that JSC employees will once again contribute to this deserving combined campaign as liberally as possible."

The pledges may be made in cash or by painless payroll deductions which will start in the first pay period in January 1976 and run for the calendar year. The pledge cards include a suggested schedule of fair-share giving based on annual individual income.

## Walt Williams Rejoins NASA

Former JSC associate director Walter C. Williams will rejoin NASA October 1 as the agency's chief engineer after an 11-year stint with Aerospace Corporation of El Segundo, California.

Williams joined Aerospace in 1964 after 24 years NASA/NACA service which included serving as chief, High Speed Flight Station, Edwards, CA., associate director Manned Spacecraft Center and Mercury Task Group in Houston and at Langley Research Center, and deputy associate administrator for manned space flight operations at NASA Headquarters. He was vice president and general manager of the Vehicle Systems Division at Aerospace.

As NASA chief engineer, Williams will review technical excellence of all programs and will report directly to the NASA administrator. His responsibility will



include assuring that programs are developed on a sound engineering basis and that mission operations planning assures success. He will review programs within NASA and industry.

Williams was born in New Orleans and earned a BS in aeronautical engineering at Louisiana State University. He holds the NASA Distinguished Service Medal, the Sylvanus Reed Award of the Institute of Aerospace Sciences, the AIAA Astronautics Award and is an AIAA Fellow.

United States and in NASA. A brief discussion period will follow each presentation. Refreshments will be served during the intermission, and there will be music to suit the occasion before and after the program.

All employees are cordially invited to attend the program and to take advantage of other films which will be shown on Monday, Thursday and Friday at 12:15 P.M. in the Auditorium Building 2 during the week of September 15-19. These films are "The Voice of La Raza," a movie about the employment situation of this group produced the Equal Employment Opportunity Commission; "Texas: Los Tejanos," a documentary of the early history of Texas, produced by a local television station; and "Portrait of a Minority" a Civil Service Commission training film showing the heterogeneity of the Spanish Speaking Americans in our country.

A Mexican menu will be served in both cafeterias on Wednesday, September 17. JSC's celebration of National Hispanic Week promises to be an enjoyable and informative tribute to the more than ten million Americans of Hispanic origin.

This program is for everyone *¡Todos Bienvenidos!*



**RESILIENT DEKE** — ASTP docking module pilot Donald K. "Deke" Slayton, right, discusses his medical progress with Dr. Clifton F. Mountain, chief of the Thoracic Surgery section of the University of Texas M.D. Anderson Hospital and Tumor Institute. Slayton was discharged from Anderson September 3, nine days after Dr. Mountain removed a benign nodule from his left lung. After a brief nap at home, Slayton spent some time in his office the day he was discharged. Slayton and his ASTP crewmates Thomas P. Stafford and Vance D. Brand will leave September 20 for a two-week tour of the Soviet Union with Soyuz crewmen Alexei Leonov and Valeriy Kubasov. Leonov and Kubasov will join the Apollo crew October 12 for a similar two-week tour of the US.

## Brooks AFB Picked For Sample Storage

NASA has selected Brooks Air Force Base, San Antonio, as the site of a remote storage facility for a portion of the lunar material brought back from the moon by Apollo crews.

Except for lunar samples out on display or under study, all of the material is stored at the JSC curatorial facility.

The Brooks facility is expected to be ready for the samples by the end of December with sample transfer expected to occur in early 1976. The Air Force and NASA are working to finalize plans and host-tenant agreements for use of the facility.

The 382 kilograms (843 pounds) of material brought back from the moon is considered a priceless national resource. Selection of the Brooks site for a remote storage facility follows a search by NASA for an additional location which would provide convenient, secondary facilities for safekeeping 10-20 percent of the lunar samples.

The samples will be kept in what is termed "dead storage." This type of storage, and the storage methods used at JSC present, allow the scientific community to keep the lunar material in pristine condition for analysis by future generations of scientists. The additional storage facility will also safeguard against

any catastrophic event affecting the material at the main JSC storage site. JSC officials liken the situation to the adage of "not putting all your eggs in one basket."

The samples to be placed in the Brooks facility represent a generalized cross-section of all the lunar material collected during the Apollo 11 through 17 missions. These samples will include lunar highland and maria material, soil and breccia samples and core samples.

## Worden Retires Joins High Flight

Apollo 15 command module pilot Alfred M. Worden last week retired from NASA and military service as chief of NASA Ames Research Center Applications Division to join Apollo 15 crewmate James Irwin's High Flight Foundation in Colorado Springs, Colo.

Worden will become a High Flight vice president, as did Skylab 4 pilot William R. Pogue on September 1. High Flight is an evangelical organization founded by Irwin in 1972.

"I am proud of my association with NASA and with my part in the Apollo program," said Worden. "The most enduring impact of the manned space program may be the concept of a finite Earth, or 'Spaceship Earth.' For the next year I intend to travel the country with my family lecturing on 'Spaceship Earth' and writing a book."

Worden, selected in the April 1966 astronaut group, retired with 20 years USAF service.

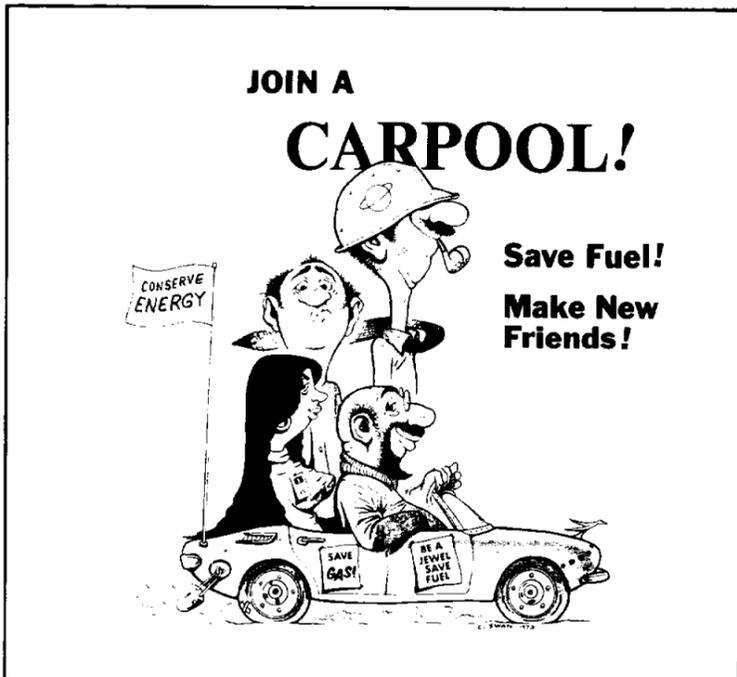
## Schmitt Resigns

Apollo 17 lunar module pilot Dr. Harrison H. "Jack" Schmitt, NASA assistant administrator for energy program at NASA Headquarters since May 1974, resigned effective August 30 to return to his home state of New Mexico to pursue geological consulting and personal activities.

Schmitt was selected as a scientist-astronaut in 1965.



**SANTA MARIA TO SHUTTLE** — Members of the Hispanic Heritage Committee meet to plan for the September 17 JSC Auditorium program "From Santa Maria to Shuttle: Hispanic Heritage Perspectives." The program is part of National Hispanic Heritage Week September 14-20. Left to right are: Jose R. Perez, Sylvia A. Salinas, Juan B. Gonzalez, Alfred A. Menchaca, Chairman Leo J. Villareal, Pamela M. Gladis, Mary Y. Kerr, Frank Weaver and Susie Gonzales. (Not in photo: Arturo B. Campos, Pantaleon Moreno.)



## Cost Cutting More Urgent As Budget Dollars Shrink

Inflation makes the NASA budget dollar shrink a lot in a hurry. We are forced to pay more for what we programmed and to make deletions or stretch schedules in some program elements.

Immediate answers to economic problems are difficult and are consuming the attention of some of the finest minds in our nation. If it

## R&QA's Gene Allen Dies September 4

Eugene F. Allen 51, one of the original group of quality personnel assigned to the Manned Spacecraft Center, died suddenly Thursday, September 4. Allen began his Civil Service career in the Signal Corps after serving 4-1/2 years in the Navy during World War II. He later served with the Bureau of Aeronautics and the Bureau of Naval Weapons prior to joining NASA on August 21, 1964. For the past 5 years Allen was assigned as a quality assurance metrology specialist and was considered an expert in his field. He worked closely with the JSC Measurements and Calibration Laboratory.

Allen was active in community affairs being a member of the Clear Lake Masonic Lodge #1417, 1st Vice President Arabia Temple Oriental Band, Past Secretary and current President of the Texas Association Shrine Oriental Bands, and a charter member of the Clear Lake Methodist Church. Also, he was a member of the National Rifle Association, and was active in local Boy Scout work.

He is survived by his wife Eleanor, a son Eugene, Jr., of League City, a daughter, Mrs. Mary Remy, of Friendswood, and five grandchildren.

makes you wonder what we at NASA-Johnson Space Center can do to help, that is good because we can do something.

To help live within the constraints of the budget and to be able to improve our position in the order of national priorities by doing so, every employee and supervisor at JSC should develop and spotlight cost reductions and improvements in operations at all levels. It is a part of everyone's job to operate as economically, efficiently, and effectively as possible.

Nearly everyone should be able to identify savings and improvements and to report these efforts through the Cost Reduction Program.

Economies reported may lead to recognition in many cases but the real motivation should be for each one of us to become identified with the team that wants NASA and our Center to indicate to our leaders and fellow taxpayers a determination to cut costs and to effect improvements.

Question expenditures. Simplify and streamline work processes. Optimize buying, and press for improved productivity.

Think of the Cost Reductions that you have witnessed in your job area. Then take a moment to fill out a NASA form 1105A (one copy) and send it through your supervisors to BH4, where it will be well treated.

**SIGN  
YOUR  
PLEDGE  
TODAY!**



## JSC Accidents Down During '74

Accidents and lost-time injuries at JSC were fewer in 1974 than in the previous year, according to the JSC 1974 Accident Experience Summary published recently by the Safety, Reliability and Quality Assurance Office.

JSC employees worked 6,591,767 man-hours during 1974 with an accident frequency rate of 1.82 per million man-hours worked. The severity rate for the year was 16.23 days lost per million man-hours worked. By comparison, 1973 had a frequency rate of 2.85 and a severity rate of 23.41.

Lost-time injuries during 1974 decreased 40 percent and days lost decreased 35 percent from 1973 figures. Injuries requiring first aid declined 29.5 percent in 1974.

Fire losses at JSC were also down in a comparison between 1974 and 1973. During 1974 there were 21 fires causing \$4,816 in property damage, compared to 24 fires in 1973 which caused \$6,328 property damage.

Down at the motor pool in 1974, there were 39 reported government vehicle accidents causing \$3,432 in vehicle damage. In contrast, 1973 had 63 government vehicle accidents and \$8,432 in damage costs.

# GO METRIC!

## Stiff Competition Expected for Golf Tourneys

The JSC Golf Association has completed its regular tournament play for the 1975 season. Competition was unusually keen this year where in every flight, trophy winners were decided on the basis of a single stroke over the entire tournament schedule. In addition to the trophy competition, there was also a battle for qualifying spots in the 2nd Annual 36-Hold Championship to be played September 27 and 28. This tournament has been named the Edward F. Mitros Championship.

This year's winners and qualifiers are: championship flight co-winners: Ted Breezy, Ivan Spiker, and Richard Stolarski; other qualifiers: Bill Nunnery, Bill Shropshire, and Jerry Shinkle.

First flight winner: Richard Theobald; runner-up: Lonnie Cundieff; other qualifiers: Al McIntyre, Cecil Jackson, Marc Broussard, and Pete Williams.

Second flight winner: Joe Nick Villarreal; runner-up: Ned Trahan; other qualifiers: Tom Jennings, Jerry Stein, Jim Cioni, and Jim Briley.

Third flight winner: Dennis Templin; runner-up: Jim Hoffman; other qualifiers: Jerry Pels, Bob Bragg, Bill Miller, and Henry Kaupp.

Low net co-winners: Jim Cioni and Joe Nick Villarreal.

## Scanners to Detect Florida's 'Red Tide'

The first long-range, space-assisted program to attempt to identify the onset of "red tide," an ocean-borne organism that leaves tons of dead fish rotting on beaches in coastal estuarine waters, has been approved by the Florida Department of Natural Resources (FDNR) and NASA's Goddard Space Flight Center, Greenbelt, Md.

Recent results obtained with ocean color scanner instrumentation developed at Goddard have demonstrated the capability of detecting subtle variations in the color of coastal waters.

Experts believe that these color

variations can be used to determine changes in concentration and species of marine phytoplankton (plant-animal) populations, especially the red tide dinoflagellate, *Gymnodinium breve*. In addition, the color scanner will be used to detect suspended sediments, dissolved solids and some water pollutants.

Program managers hope that photographic overflights by NASA's U-2 aircraft, lower-flying planes, and electronic scanning by LANDSAT spacecraft, in conjunction with on-site sampling of oceanic waters from research ships, will lead to the development of techniques for an early warning system for red tide invasions, or "blooms." Such a system would provide enough warning time to allow authorities to delineate the actual extent and magnitude of a red tide occurrence. That information would be available in time to permit crews to combat effects of a red tide and inform the public about beach areas that could be affected.

In the past, reports of dead fish littering Florida beaches have had an adverse effect on tourism. A red tide outbreak in the spring and summer of 1971 was estimated to have cost Florida \$20 million or more, primarily in lost tourist business.

Red tide not only occurs in Florida but can be a major problem in other parts of the world, including Maine, Massachusetts and California. Fish decomposition can deplete the water of much of its oxygen, and toxic particles produced by the organism can cause eye and respiratory irritations in people. The toxin also affects shellfish, which may store it in their bodies. As a result, shellfish beds often have been closed for several months by state health authorities.

The ocean color scanner to be used in the experiments was designed by Goddard's Dr. Warren Hovis for the Nimbus-G pollution-sensing spacecraft scheduled for launch in 1978. Dr. Hovis has been testing the sensor in Florida coastal waters from U-2 aircraft.

Accurate analyses of various kinds of water coloration in the ocean depend on data collections made by different means. Accordingly NASA's Goddard Center is developing a submersible transmissometer that measures water clarity and a submersible scattering meter which measures how daylight scatters in water, for use in a cooperative study with Florida's resources department.

These two instruments and other sensing devices will be used to collect "surface truth" information from FDNR's 22-meter (73-foot) research vessel *Hernan Cortez*. Later during the two-year project, a submersible spectroradiometer for measuring the ocean color spectrum, also being developed at Goddard, will be taken aboard to measure optical properties of sea water.



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# ROUNDUP

NASA LYNDON B. JOHNSON SPACE CENTER HOUSTON, TEXAS



The Roundup is an official publication of the National Aeronautics and Space Administration Lyndon B. Johnson Space Center, Houston, Texas, and is published every other Friday by the Public Affairs Office for JSC employees.

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**OUTSTANDING SECRETARY** — Betty F. Allen of the Financial Management Division's General Accounting Branch was selected JSC Outstanding Secretary for August. Shown here with JSC Director Christopher C. Kraft, Jr., Betty was cited by her supervisor as excelling in accuracy, neatness and promptness in preparing branch reports and correspondence, while showing a genuine interest in her job and a desire to be helpful.

**A FAMILY AFFAIR**

## Simmons Couple Active In Pasadena Stagings

*Everybody Loves Opal*, opening a 4-weekend run on September 5, marked the beginning of Pasadena Little Theatre's 20th Season and the 13th local season for veteran actress Jo Simmons, the wife of Propulsion and Power Division's Bill Simmons.

This "prank in 3 acts" by John Patrick features Jo in the leading role of Opal, an amusing old rag-bag with a heart of gold, and is a hilarious comedy suitable for the entire family. Joe needs no introduction to theatre goes as she is widely known for the professionalism of both her acting and directing. On the active side, in one challenging role after another, such as Blanch in *Streetcar Named Desire*, Lady in *Orpheus Descending*, Amanda in *Glass Menagerie* and Eleanor of Aquitaine in *The Lion in Winter*, her performances emotionally drained the audience and, as Jo says, "They left me plumb wore out!"

Her comedic talent was evidenced in the vignette of Mrs. Sourberry in Theatre Under the Stars' production of *Oliver* which played to audiences totalling over 75,000.

Jo's long experience in the dramatic arts began in Philadelphia and later expanded in roles throughout the east coast, in Canada and in Europe — in both professional and community theatre. She attributes much of her capability in comedy to her work in stock companies and the Bucks County Playhouse. Her directorial talent has been evident in such local productions as *Crucible*, *Heiress*, *Picnic* and *Third Best Sport* at the Clear Creek Country Theatre and by *Diary of Anne Frank*, *Hasty Heart* and *Majority of One*, among others at PLT. Later in the PLT season Jo will direct *The Night of January 16th*.

Meanwhile back at the ranch husband Bill has also again become involved with PLT activities after a "sabbatical" of several years during which he concentrated his efforts in

the membership activities of the American Institute of Aeronautics and Astronautics on the local, regional and national levels. Bill is the production manager for PLT

(Continued on page 4)

# EAA Attractions

**PLAN NOW TO ATTEND THE EAA PICNIC**  
Saturday, September 27, 1975  
Tickets on Sale Now

The EAA annual picnic is just three weeks away — September 27. The picnic will be at the Recreation area onsite again and our long-range weather prognosticator is predicting the weather will be cooler and dryer than last year. All the familiar favorites will be there: kiddie rides and game booths, cartoons, rock band, cow chip and egg throwing contests, horseshoes, arts and crafts and club exhibits, log pull, etc.; plus-barbecue or hot dogs with all the trimmings, an unlimited adult and child beverages, cotton candy, popcorn and snowcones. Additions this year include a softball exhibition between the two top teams in the JSC Super Team competition, a tug-o-war match between the two

finalists in that event, and returning, after a year's absence, the Dunk Tank, featuring girls and astronauts on the EAA's new two-seater. Tickets are now on sale at the Bldg 11 store and from most representatives. Tickets are \$3.00 for adults (barbeque) and \$2.00 for children (hot dogs) until September 12. After that they will be \$3.25 and \$2.25. If your child wants barbeque, he will have to buy an adult ticket.

**BLOOD DRIVE**  
SEPTEMBER 24

The next JSC Blood Drive is scheduled Wednesday, September 24, at the Recreation Center — just in time to get rid of a pint of old blood and make some fresh for the picnic on Saturday the 27th. Seriously, your blood is needed to keep

the JSC Blood Bank going. The Blood Bank now includes all the major contractors as well as NASA, and up to now the contractor participation has been far greater. Let's do our share — call Helon Crawford X3809 or Les Wynn X3427 for an appointment.

**BOBBY RIGGS OPEN**  
Sponsored by the JSC Tennis Club  
September 20 & 21, 1975

- **WOMEN LOBBERS!** Burn your bras and enter the first JSC Sexless tournament!
- **MALE CHAUVINIST PIGS!** Let's put'em back in the kitchen!
- **SKILL, NOT SEX, DETERMINES BRACKET**
  - Advanced
  - Advanced-Intermediate
  - Intermediate
  - Novice
- **SINGLES ONLY.** \$1.00 entry fee.
- **ENTRIES MUST BE SUBMITTED TO D. L. "RED-NECK" BOREN (Code LV), BY SEPTEMBER 14, 1975.**

**TICKETS AVAILABLE**

Available in Building 11 Exchange Store, X4814 10:00 a.m. to 2:00 p.m. NO REFUNDS. **SPORTS** — Houston Astros Baseball, \$3.15 Reserve and \$4.00 Box (regular \$3.50 and \$4.50). Remember September is the last month for baseball. **PLACES OF INTEREST** — Sea Arama, Adults \$3.25, Children \$2.25 (regular \$4.25 and \$3.25); Disney Magic Kingdom Cards, FREE — Good at Disneyland and Disneyworld for special price ticket books and a 10% discount at most Howard Johnson's; Lion Country Safari Cards — FREE; Six Flags Funseekers Club cards — FREE, entitles card holder and family to \$1.00 savings on each ticket purchased at Astroworld, Six Flags Over Texas plus a 10% discount at 80 major hotels in the area, and more. **ABC Interstate Theatre**, \$1.50. **DINNER THEATRES** — Windmill Dinner Theatre — \$14.00 Couple (regular \$20.00). Starting August 18 James Drury in "Catch Me If You Can." Tickets on sale. Dean Goss Dinner Theatre — \$16.00 Couple (regular \$20.00).

**SHRINE CIRCUS**

The EAA will sponsor again this year NASA Night at the Arabia Shrine Circus, but this year there will be two NASA Nights, Sundays, October 5 and October 12. Both performances start at 6:30 P.M. in the Sam Houston Coliseum. This year's Circus consists of man outstanding acts, including:

"**TARZAN**" — the finest Wild Animal Act in the Circus world today — back for an unprecedented 4th year by popular demand; "**THE SMAHAS**" First time in Houston; Beautiful Lipizzan Stallions performing the difficult "Capriole"; "**VICTOR JULIAN**" — Performing Poodles that will please the "Kids

(Continued on page 4)

**ENTRY FORM**

Enclosed is \$1.00 for my entry in the Bobby Riggs Open. For the Tournament Committee's information and assistance in assigning brackets, I think I should be in the \_\_\_\_\_ bracket. In addition, I have played the following members of the opposite sex (include scores): \_\_\_\_\_

NAME \_\_\_\_\_ PHONE \_\_\_\_\_

## Roundup Swap-Shop

Swap Shop advertising is available to JSC and on-site contractor personnel. Articles or services must be offered as advertised, without regard to race, religion, sex or national origin. Ads should be 20 words or less, including home telephone number. Name and office code must accompany, but need not be included in ad copy. Typed or printed copy must be received (AP3 Attn: Roundup) by Thursday of the week before publication.

**BOATS**

For sail: Dolphin Sr. 15-ft sailboat w/galv trailer, xtra wheel and more. 334-4472.  
72 16-ft Del Magic, 64-hp OB, Little Dude trlr, xcint cond, xtra ski equip, kept inside, small usage on boat/eng. Stafford, 334-2761.  
Dolphin Sr. sailboat w/trlr, xcint cond, \$750. Littleton, 334-1835.  
15-ft Duckhawk bassboat, 50-hp Johnson, Super motor guide, fish finder, big-wheel trlr. Grow, 471-0654.

**PETS**

Rediscover outdoors w/your own good hunting dog, adorable Brittany Spaniel male puppy, AKC, wormed, shots, \$85. Farley, 471-2629.  
Adorable Teddy Bear hamsters, \$1 each. Andrea, 334-2129.  
Stud colt, 1/2 quarter, 1/2 thoroughbred, AQA reg, small for age, needs attention. 334-1791.  
AKC reg wirehair fox terriers, male 13-mos \$95, female 19-mos \$75, pair \$160. Bruce, 482-0553.  
Baby boa six ft long, xcint pet, silent but affectionate, \$100. Rubenstein, 334-2354.

**VEHICLES**

75 Cutlass Supreme, pwr steer/brakes, AM/FM stereo, low mileage, red w/white landau vinyl top, \$4850. Reid, 559-1062.  
71 Chrysler New Yorker 4-dr, all pwr, FM/AM, very clean, \$1695 or best offer. Satterfield, 474-3127.  
66 Dodge 2-dr hardtop, 318 eng, very clean, \$375. McConnell, 941-0489.  
70 Dodge Coronet 2-dr hardtop, 318 V8, \$1250 or best offer. 488-2624.  
71 Plymouth Fury 4-dr hardtop, clean, \$1300 firm. 474-4080.  
73 GMC 1/2-ton crew cab pickup Sierra Grande, 454 eng, all pwr, gooseneck trlr hookup, 31,000 miles. Wood, 482-3059.  
16-in girl's bicycle, rubber tires, good cond, \$10; add \$5 for new trng wheels. Plauche, 474-2660.  
66 Mustang 289, 4-spd xmission, radials, Monroe shocks, new brty, \$699. 534-2394 after 5.  
72 Honda CB350-K2, new tires, pipes, crash bar, air filters, xtra tire, windshield, xtra clean. 333-3426.  
71 Honda 50 Mini-Trail, less than 200 miles, like new. 333-3426.  
72 Cutlass Supreme, air, pwr, stereo tape, gold/white w/white int, xcint cond, \$2600. Steve, 488-5829.  
72 Chevy Suburban 4-whl dr, air, 350 eng, positraction; good for hunting/camping as well as city transportation,

\$3125 or best offer. Moran, 479-1375.  
72 Honda CL175-K6, good cond, 11K miles. Ed, 482-1629 after 6.  
72 Honda CB450, \$550. Price, 471-3314.  
72 Cadillac Fleetwood Brougham, all options avail, radials, tape, 37,000 miles xcint cond, \$3500. Maxwell, 482-1015.  
Rent Beech Musketeer based at La-Porte, \$20/hr wet. Siler, 333-2787.  
71 Opel 4-dr, 28K miles, autotrans, air, good cond, must sell. 946-5927 after 5.  
72 Husky 250 motocross; 73 CR250 Honda Elsinore, going to college — must sell. 481-6439.  
74 Chevy pickup C-10 Custom, 6-cyl, std, Fleetside. 481-6439.  
Yamaha 175 Enduro, xcint cond, adult owner, \$375. Schmitt, 534-6381.  
69 Fiat 850 Spider, 35 mpg, \$650 or best offer. Baldwin, 334-3303.  
70 Olds 98, loaded, xcint mechanically, minor body work needed, \$1200 or best offer.  
71 Yamaha Twin 90, clean, needs elect repaired, \$85. 482-3100.  
74 Hornet hatchback, std xmission, V8, air, pwr steer, xcint cond, low mileage, \$3195. 944-7053.  
73 Yamaha 100 Enduro, 1650 miles, xcint cond, never raced. Ward, 483-6104.

**WANTED**

Trombone or baritone player for JSC brass quartet, meet biweekly during lunch. Tim, 483-3532.  
Ride to work 8 a.m., from Sunny Side area between Reed and Coffee street 9400 blk. Mamie Eames, x5326. Want belt massager in good cond. 488-4393 after 5.  
**PROPERTY AND RENTALS**  
Seabrook 4-2 1/2, large landscaped lot, fruit trees, sewing room, covered patio, 1 1/2 story, see to appreciate. Plauche, 474-2660.  
4-2-2 Oakbrook/CLC, lg fenced lot on culdesac, covrd patio, fam room w/ cathedral ceiling, nice landscpd, xcint cond, \$44,600. 488-5506.  
2/3-acre lot, Lake Forest Falls, priv lake, water sports, fishing, two mi from Lake Conroe of Rt 105, water and util, hrd sfc roads, \$6000. 473-1000 after 5.  
Well-located lot at Lake Houston (Indian Shores), orig cost \$6500; need \$4433 (\$2733 @ \$50/mo and \$1700 equity), 1/4-acre, wooded, near tennis/golf facilities. 944-9030.  
Rent: 14-ft wide mobile home, Spanish decor, 2-br, central air/heat, shag carpet, trees, water furn, Friendswood suburbs, \$155/mo. 331-5826.

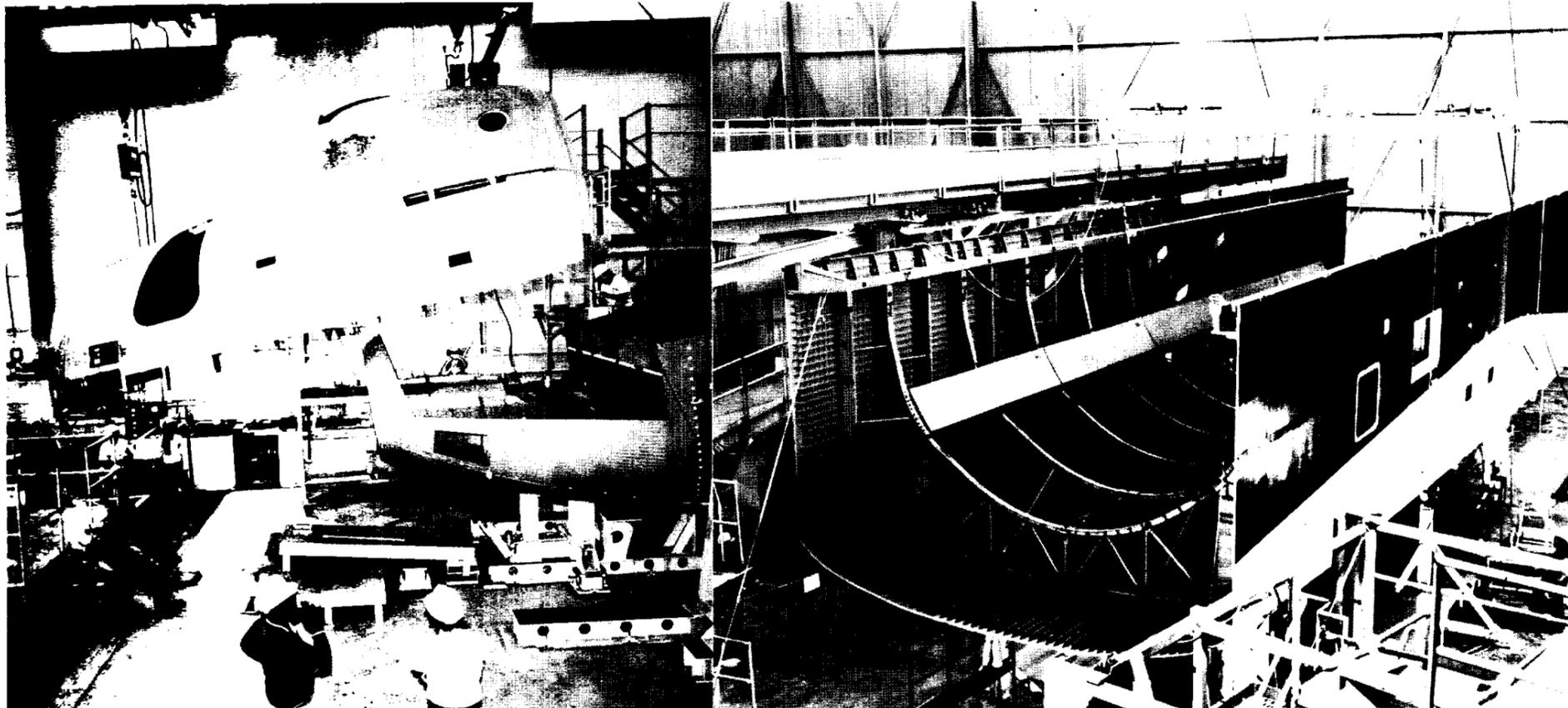
**HOUSEHOLD ARTICLES**

25-in Sylvania color TV, needs work, \$50; 1-ton window AC, 115-v \$35; 2-step fldng tailgate steps \$7. Burt, 333-2117.  
Bunkbeds, oak, w/hdbrds-ftbrds, postureboard foundations, guardrail, ladder, good cond, \$75. Moore, 488-4080 after 5.  
Trundle bed, steel frame, two 6-in foam mattresses w/covers, like new, \$150. Moore, 488-4089 after 5.  
30x80 hvy mirror, pair lined floral draperies, like new, 72x84-in, make offer. Baldwin, 334-3303.  
Sony TC-355 tapedeck, reel-to-reel, solid state, xcint cond, \$100. 488-6465.  
Ampex automatic stereo cassette tape player (plays up to 5 cassettes) \$125. Manny, Texas City 945-3094 after 4:30.  
Antique 3-dwr oak dresser, orig brass hdwe, \$50; low 3-dwr (2 small, 1 lrg) oak chests, wood knobs, \$50; round mahogany lamp table, 3-leg pedestal, \$35, oak fldg bookshelf, \$45. 334-1869 after 6.  
Beautiful 6-ft Gamber-Johnson walnut cabinet for stereo comps, integral spkr encls, cost \$295, sell \$90. 334-1275.  
60 yards beige carpet, good cond, \$65. Bullock, 488-1042.

**MISCELLANEOUS**

2-wheel open trlr, 3 1/2x7-ft bed, steel welded frame, leaf sprgs, 15-in wheels, \$50. Satterfield, 474-3127.  
RCA 21-in color console, needs work, \$50. 482-3100.  
Ampex stereo cassette plyr/rcdr, plays six in stack, \$100. 482-3100.  
16-ft tandem trlr, wood floor, low side rails, 75 TX farm lic, \$300. Gene 944-8205 after 5.  
Beautiful mink stole, good buy. 488-4412.  
K&E log-log duplex decitrig sliderule w/case, hndbck, \$15. Bennett, 483-2986.  
Royal manual typwrtr w/cover, \$35. Bennett, 483-2986.  
Football tickets: U of H vs Fla State Nov. 22; Tulsa Nov 29, two xcint seats, resvd prkng, \$14. 331-3976 after 5.  
Royal and Smith-Corona prtbl typewrtrs, \$20 each; cornet mus inst \$50. DeMoss, 488-4019.  
J78x15 Goodyear Polyglass tire, 6000 miles, \$15. Blucker, 488-4188.  
Four Astroworld tickets @ \$5 each, 75 season. 488-0367.  
Electronic parts from RCA color TV, \$5. Erickson, 488-1901.  
Approx 200 sq ft of real Mexican tile, \$75. Schmitt, 534-6381.

Min AM-FM car radio, lift-out, w/two ext spkrs, \$20. Mitchell, 483-4601.  
Fertilized coastal hay, \$2/bal delvd. 554-6630.



FIRST SHUTTLE ORBITER TAKING SHAPE — The upper forward fuselage, including the crew cabin, is moved into position (left) for mating with the lower fuselage structure at Rockwell International Space Division's Downey, California plant. The for-

ward fuselage will be moved to RI's assembly facility at Palmdale, California in late October, where it ultimately will be joined to the Orbiter mid-fuselage and cargo bay (right), shown on workstands at Palmdale. General Dynamics-San Diego built the mid-fuselage.

Target date for completion of first Orbiter assembly at Palmdale is September 1976. (RI Space Division photos)

## Orbiter Aft Fuselage Trucked to Palmdale

The aft fuselage for Space Shuttle Orbiter 101 Tuesday arrived at Rockwell International's assembly facility in Palmdale, California after a 100-mile truck journey from RI Space Division's Downey plant. Leaving Downey at 10 p.m. PDT Monday, the 20-foot high, 17-foot wide aft fuselage was trucked northeastward through San Bernardino and Cajon Pass to reach the assembly plant in Antelope Valley Tuesday morning.

Move planners had to choose a circuitous route from Downey to Palmdale with a minimum of overpasses and overhead powerlines.

The aft fuselage joins the mid-fuselage, vertical tail and wing panels delivered to Palmdale earlier in the year by RI's subcontractors. In October the forward fuselage section, now undergoing final assembly at Downey, will be moved to Palmdale. (See photo, above left.)

Rollout of the first Orbiter is presently scheduled for the third quarter of 1976, and approach-and-landing tests — with the Orbiter dropped from a Boeing 747 carrier aircraft — are scheduled for NASA Flight Research Center in the second quarter of 1977.

## Simmons

(Continued from page 3)

this year. In the past he has served PLT in many capacities and is a past president of the group. He has directed at both PLT and CCCT and usually designs the sets for Jo's shows; as he says, "those who work together in the theatre can go crazy together, and that's real togetherness".

PLT productions following *Opal* are *Count Dracula*, *A Thousand Clowns* and *Jo's Night of January 16*. All play four weeks (Fri and Sat) with curtain at 8:30 p.m. In addition to these major productions, PLT's Theatre for Children will present *The Tortoise and the Hare* (Sep 13), *A Christmas Carol* (Dec 6) and *Ransom of Red Chief* (Mar 6); these productions also run 4 weeks on Saturday and Sunday afternoons.

Admission to major productions is \$3 (students \$2); ticket books and group rates are available. Information on PLT and its productions can be obtained from Bill Simmons, Ext 5371, or from Jo at 649-2558.

## Co-Op of Month



INTENSE INTEREST in assigned projects has been shown by co-op employee Dennis Wells, according to his supervisor in Power and Propulsion Division's Thermochemical Test Branch. Assigned to P&PD since May 1975, Wells has "conducted complex test programs — with minimum supervision — on solar panels, hydrogen generation systems and fluid flow systems," while showing an eagerness to enhance his knowledge and skills.

## NSA to Offer Exam Review

The NASA Clear Lake Chapter of the National Secretaries Association (International) will offer a Certified Professional Secretaries Exam Review Course this fall.

Orientation and registration will be the evening of September 8, 6:30 p.m. at the Gilruth Center, Room 215, Johnson Space Center, NASA Road 1. Classes will begin September 15.

The course is designed to assist secretaries who are preparing to sit for the Certified Professional Secretary examination, as well as enhance the qualifications and professionalism of any secretary. Instructors will be Certified Professional Secretaries, and professors and instructors from area schools and universities.

For further information, please contact Virginia Thomas, CPS, 474-4191; Lee Carr, 488-3173; or Georgia Yawn, 483-5195.

## Backup Skylab Readied For Smithsonian Museum

Certain "backup" Skylab space station hardware, built but not needed in the Skylab program, is being prepared for shipment to the Smithsonian Institution, Washington, D.C., by the NASA-Marshall Space Flight Center.

An Orbital Workshop, core of the Skylab cluster, an Airlock

Module and Multiple Docking Adapter, with all equipment removed that can be used in current programs such as Space Shuttle and Spacelab, will be displayed at the Smithsonian's new National Air and Space Museum in Washington. The Museum is set to open July 4, 1976, and eight million visitors a year are expected to see the hardware.

The Orbital Workshop manufacturer, McDonnell Douglas Astronautics Co., is cutting the workshop into three segments so that it can be taken into the museum building. Two doors are also being cut in the workshop, and the floor strengthened, to facilitate tourist flow through the large space station which has the volume of a small three-bedroom house.

With this work completed, the workshop will be temporarily bolted back together and shipped by barge via the Tennessee, Ohio and Mississippi Rivers to New Orleans and around the tip of Florida to the Kennedy Space Center, Fla., where additional Skylab items will be added to the vessel.

The Skylab hardware will leave the Marshall Center by Oct. 31 and will be barged from Florida to Washington to arrive by Nov. 20. The Workshop will then be disassembled, placed in the Museum and reassembled.

## New Film List Out

Photographic Technology Division's Audio Visual and Motion Picture Production Office has an updated catalog of 16mm NASA films available for group screening loans. The catalog may be requested from the Film Distribution Library, 333-4980.

## Service Awards Received by 30

Length of Service Awards for the final quarter of FY75 recently were made to 30 JSC employees. The employees, total years service, and directorates are:

Joe M. Pirtle 25, Wauretta P. Hendrix 30 and Alver K. Spivey 35 of Administration and Program Support; Joe J. Guerrero 25 and Eddie J. Lemons 25 of Flight Operations; Alma B. Scarborough 25 of Life Sciences; James E. Downs 25 and Michael K. Lake 25 of Engineering and Development. Howard W. Tindall, Jr. 30, Sterling L. Fugman 30, Richard A. Holman 35 and Marcus D. Garner 35 of Data Systems and Analysis; Jose P. Olivares 35, Robert B. Boyd, Jr., 25, Joseph L. Edwards 25, Inocencio M. Cortez 30, J. C. Chatman 25, and Johnny L. Bates 30 of Center Operations; Harold E. Gartrell 25 of Space Shuttle Program; Aaron Cohen 15 of Space Shuttle Orbiter Project Office.

Harrison F. Shoemaker, Jr. 30 of Safety, Reliability and Quality Assurance; Joe G. Garcia 25, Bradford D. Jackson 25 and Fredrick E. Stockum 30 of Science and Applications; Clifford M. Jackson 30, John A. Zill 30, Joe W. Dodson 35 and William A. Kelley 25 of Program Operations.

## EAA Attractions

(Continued from page 3)

of all Ages"; "PABLO RODRIGUEZ" — Amazing Aerial Artists performing fantastic feats high above the Coliseum floor. First time in Houston; "THE DYMEKS" — Poland's finest Acrobatic Bar Trio — Houston Debut; ... And many, many, many more!!

A Circus that you will be proud to support and delighted to see — ACT NOW — your family and friends will be glad you did.

Tickets for the best seats in the house — center ring — which regularly sell for \$6.00 are available for these performances only at \$4.00. (Building 11-Exchange Store.)

## POCKET CALCULATORS

The Exchange Store in Bldg 11 now has in stock several new lines of pocket calculators and has announced some price changes. New models now in stock are HP21, HP25, HP70 and HP80 with HP65 on order.

The Rockwell 63R has been reduced to \$78 from \$89.95, the Sharp EL-8005S to \$15 from \$16.95, TI-2500II now \$36 from \$39.95, TI-5050 now \$133 from \$149.95, TI SR-16 \$53 from \$59.95, and TI-1250 now \$20 from \$21.95. The TI SR-11, 3500/340 and 4000/410 models have been discontinued.